

with parallel surfaces, the summ of all the refractions will be equal to the single refraction which it would have suffered in passing immediately out of the first medium into the last. And this holds true, though the number of the refracting substances be increased to infinity, and the distances from one another as much decreased, so that the Light may be refracted in every point of its passage, and by continual refractions bent into a curve Line. And therefore the whole refraction of Light in passing through the Atmosphere from the highest and rarest part thereof down to the lowest and densest part, must be equal to the refraction which it would suffer in passing at like obliquity out of a Vacuum immediately into Air of equal density with that in the lowest part of the Atmosphere.

Now, by this Table, the refractions of a Pseudo-Topaz, a Selenitis, Rock Crystal, Island Crystal, Vulgar Glass (that is, Sand melted together) and Glass of Antimony, which are terrestrial stony alcalizate concretes, and Air which probably arises from such substances by fermentation, though these be substances very differing from one another in density, yet they have their refractive powers almost in the same proportion to one another as their densities are, excepting that the refraction of that strange substance Island-Crystal is a little bigger than the rest. And particularly Air, which is 3400 times rarer than the Pseudo-Topaz, and 4200 times rarer than Glass of Antimony, has notwithstanding its rarity the same refractive power in respect of its density which those two very dense substances have in respect of theirs, excepting so far as those two differ from one another.

Again,

Again, the refraction of Camphire, Oyl-Olive, Lintseed Oyl, Spirit of Turpentine and Amber, which are fat sulphureous unctuous Bodies, and a Diamond, which probably is an unctuous substance coagulated, have their refractive powers in proportion to one another as their densities without any considerable variation. But the refractive power of these unctuous substances is two or three times greater in respect of their densities than the refractive powers of the former substances in respect of theirs.

Water has a refractive power in a middle degree between those two sorts of substances, and probably is of a middle nature. For out of it grow all vegetable and animal substances, which consist as well of sulphureous fat and inflamable parts, as of earthy lean and alcalizate ones.

Salts and Vitriols have refractive powers in a middle degree between those of earthy substances and Water, and accordingly are composed of those two sorts of substances. For by distillation and rectification of their Spirits a great part of them goes into Water, and a great part remains behind in the form of a dry fixt earth capable of vitrification.

Spirit of Wine has a refractive power in a middle degree between those of Water and oily substances, and accordingly seems to be composed of both, united by fermentation; the Water, by means of some saline Spirits with which 'tis impregnated, dissolving the Oyl, and volatizing it by the action. For Spirit of Wine is inflamable by means of its oily parts, and being distilled often from Salt of Tartar, grows by every distillation more and more aqueous and flegmatick. And

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Chymists